

MULTI-PLY TRUSSES

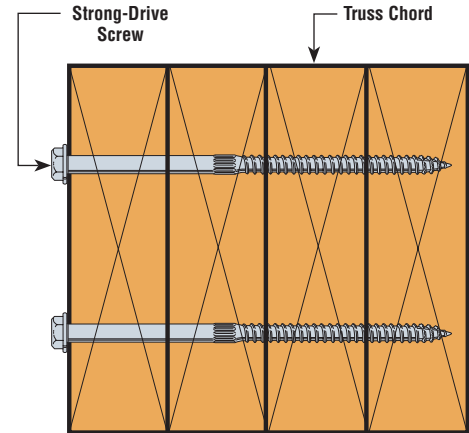
GIRDER TRUSSES

1. Install Strong-Drive screws a minimum of 1 inch into the last truss ply, with a maximum gap of 1/8" allowed between each truss ply.
2. Screw spacing shall not exceed 24" o.c.
3. Hanger load spacing on the multi-ply truss shall not exceed 24" o.c.
4. The Truss Designer shall ensure that adequate lateral bracing is provided to prevent displacement of the truss and the truss bottom chord due to the torsion created by the structural members framing into the side of the multi-ply girder truss.
5. If Strong-Drive Screws are installed in the wrong truss face, install additional screws in the correct face with maximum spacing of 2x the required spacing, not to exceed 24" o.c. Offset the additional screws from the existing screws to prevent splitting.
6. Do not install Strong-Drive Screws through metal truss plates unless approved by the Truss Designer – pre-drilling is required.
7. The Truss Designer shall ensure that the use of Strong-Drive Screws for joining multi-ply trusses is allowed by the Building Official before the truss design is completed.
8. Use 1 row of SDS's in 2x4, 2 rows in 2x6 and 2x8 members, 3 rows in 2x10 members. Rows should be staggered.
9. Individual screw locations may be adjusted up to 1/2 of the required screw spacing to avoid conflicts with other hardware or to avoid lumber defects.



**Simpson Strong-Tie®
Strong-Drive® Screw**

U.S. Patent
6,109,850; 5,897,280; 5,044,853



Screw Position in the Truss

Model No.	Factored Shear Resistance			
	D.Fir-L (G=0.49)		S-P-F (G=0.42)	
	Standard Term	Short Term	Standard Term	Short Term
	(K _D =1.00)	(K _D =1.15)	(K _D =1.00)	(K _D =1.15)
	lbs	lbs	lbs	lbs
	kN	kN	kN	
SDS25412	345	395	280	320
	1.54	1.76	1.25	1.43
SDS25600	345	395	280	320
	1.54	1.76	1.25	1.43

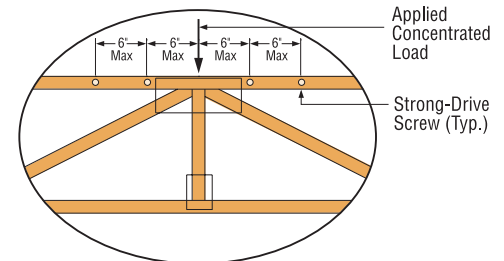
1. Factored resistances shown are in accordance with 3.3.2 CSA O86-01 and have been soft converted from working stress and the NDS 1997. Apply the adjustment factors K_D, K_{SF} and K_{TR} as per 10.6.6 CSA O86-01 for lag screws to the tabulated values shown.
2. Resistances are based on 1 1/2" thick side members and apply to 3 and 4 ply 2x wood truss applications (side and main members of the same species). Contact Simpson Strong-Tie for other applications.

TWO-PLY 4X2 FLOOR TRUSSES

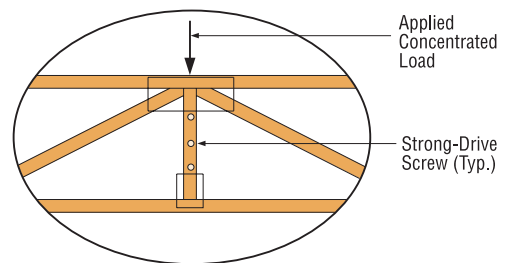
For more information, request T-SDSCREWAPPS.

The use of Strong-Drive screws ensures that loads are adequately supported by both trusses. (Testing has shown that most currently available light gauge steel connectors do not uniformly distribute applied loads to both trusses.) In addition differential deflection between the two trusses is reduced.

1. Screw spacing shall not exceed 24" o.c. and shall not be less than 4" o.c. A minimum end distance of 3" shall be provided at all truss members.
2. Gap between the trusses shall not exceed 1/8".
3. Floor sheathing shall be screwed (or nailed) to each truss top chord. (Fastener spacing per the applicable Code requirements, or 12" o.c. max.)
4. Strong-Drive screws shall be installed with the screw heads in the loaded truss. If the screws are installed in the wrong truss face, install additional screws in the correct face with a maximum spacing of 2x the required spacing, not to exceed 24" o.c. Offset the additional screws from the existing screws to prevent splitting.
5. Do not install Strong-Drive screws through metal truss plates unless approved by the Truss Designer – pre-drilling is required.
6. The Truss Designer shall ensure that each truss is designed for the appropriate load(s) considering the location of the applied load(s) and the location of the Strong-Drive screws.
7. The Truss Designer shall design all trusses and the truss system to meet all Code and TPIC requirements.
8. Individual screw locations may be adjusted up to 3" to avoid conflicts with other hardware or to avoid lumber defects.
9. Strong-Drive screws shall not be installed in areas where lumber wane exceeds 1/4".
10. All concentrated loads were assumed to be applied at truss panel points.



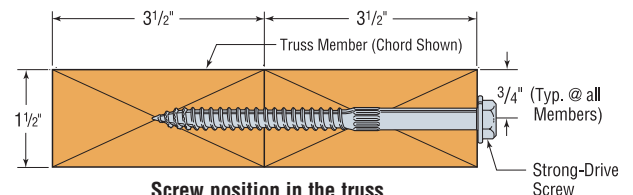
Installation Method 1 - Top Chord



Installation Method 2 - Vertical Web

Model No.	Factored Shear Resistance			
	D.Fir-L (G=0.49)		S-P-F (G=0.42)	
	Standard Term	Short Term	Standard Term	Short Term
	(K _D =1.00)	(K _D =1.15)	(K _D =1.00)	(K _D =1.15)
	lbs	lbs	lbs	lbs
	kN	kN	kN	
SDS25600	300	345	260	300
	1.34	1.54	1.16	1.34

2. Method 1 – To be considered effective all Strong-Drive screws shall be installed within 12" of the applied concentrated load.
3. Method 1 and Method 2 screws can be combined as required to transfer half of the applied load to the supporting truss.
4. For uniform top chord loads, space Strong-Drive screws as required to transfer half of the applied load to the supporting truss.
5. Web configurations other than those shown above may be used as allowed by the Truss Designer.



Screw position in the truss