

ALPINE TrusSteel™ Specification Data Sheet

Steel products - Revision 2015

PRODUCT DISTRIBUTION

Alpine TrusSteel, 2400 Lake Orange Dr., Ste. 150 Orlando, FL 32837, www.trussteel.com, 888 565 9181

PRODUCT DESCRIPTION

Alpine TrusSteel Cold-Formed Metal Truss Components are designed to provide exceptional performance in the fabrication of roof and open web floor trusses for the commercial and residential framing markets (CSI 05 44 00). The proprietary roll-formed chord material provides the highest strength-to-weight ratio available in the market today. The system was specifically designed to utilize the benefits of symmetrically loaded and distributed forces using tube or symmetrical roll-formed web materials and proprietary Alpine TrusSteel Double-Shear™ fasteners. This delivers unmatched truss stability and outstanding structural performance.

Alpine TrusSteel's chord material is currently produced in several distinct sections and sizes and each chord section is available in several gauges. The combination of the multiple chord sections with various web options provide the architect, engineer, and contractor with additional flexibility when designing structures.

Alpine TrusSteel CFS (Cold-Formed Steel) truss system provide a cost effective option for supplying the growing demand for non-combustible framing products and is an excellent substitute for stick-framed C-stud, bar joist, and fire retardant lumber systems.

TECHNICAL DATA

All steel conforms to ASTM A653-09, A924-14 and A500-01a standards. TrusSteel truss chord sections are manufactured from 55 ksi steel in 22, 20, 18 and 16 GA Thickness and 50 ksi steel in 14 and 12 GA thickness. The web material is manufactured from 45 ksi steel in 20, 18 and 16 GA thickness. All materials have G90 or equivalent galvanization.

TrusSteel Chord Material			TrusSteel Web Material		
22 GA	55 ksi	0.0284 in.	20 GA	45 ksi	0.0330 in.
20 GA	55 ksi	0.0329 in.	18 GA	45 ksi	0.470 in.
18 GA	55 ksi	0.0428 in.	16 GA	45 ksi	0.0630 in.
16 GA	55 ksi	0.0538 in.			
14 GA	50 ksi	0.0677 in.			
12 GA	50 ksi	0.0966 in.			



The calculations of the structural properties for Alpine TrusSteel truss chords and webs are in compliance with the standards set forth in the AISI S100-12: North American Specification for the Design of Cold-Formed Steel Structural Member. TrusSteel trusses are designed in compliance with the AISI S214-12 "North American Standard for Cold-Formed Steel Framing – Truss Design 2012 Editions".

All web to chord member connections shall employ the appropriate Alpine TrusSteel self-drilling fasteners. Due to the proprietary Double-Shear™ and Anti-Backout™ thread technologies utilized in the fastener design, there are no allowable substitute fasteners. Alternative fastening methods such as welding are not acceptable.

Alpine TrusSteel Self-Drilling Fasteners			Lateral Load Capacity (lbs.) Chord Material Thickness					
			22 GA	20 GA	18 GA	16 GA	14 GA	12 GA
14AMS.75	3/4"	No 14 SS	266/437*	266/437*	266/437*	266/437*	266/437*	266/437*
14AMDB1.25	1 1/4"	No 14 DS	654	722	822	N/A	N/A	N/A
14AMDR1.5	1 1/2"	No 14 DS	654	722	822	N/A	N/A	N/A
14AMDB2.125	2 1/8"	No 14 DS	654/728†	722/914†	822/1181†	930/1264†	930/1264†	930/1264†
14AMDB2.375	2 3/8"	No 14 DS	654/728†	722/914†	822/1181†	930/1264†	930/1264†	930/1264†

* Fastener value with 20 GA web material / fastener value with 18 GA web material or thicker.

†Fastener value with 20 GA web material / fastener value with 18 GA & 16 GA web material or thicker.

PRODUCT AVAILABILITY

TrusSteel Cold Formed Metal Trusses are available from authorized Alpine TrusSteel component fabricators throughout North America, Canada and Europe. Project layouts, component designs, and project costs are available from the authorized fabricators in that network. Contact Alpine TrusSteel at www.trussteel.com or (888) 565 9181 for assistance in locating the nearest TrusSteel fabricator.

TECHNICAL SERVICES

Alpine TrusSteel CFS roof and floor trusses are designed by authorized Alpine TrusSteel component fabricators utilizing Alpine TrusSteel truss design software. Individual truss component designs and any special roof component design requested by the Alpine TrusSteel component fabricator are provided by the professional engineering staff of Alpine Engineered Products. The overall building design remains the responsibility of the project Engineer/Architect of Record.

INSTALLATION

It is the responsibility of the General Contractor and/or Truss Framing Sub-Contractor to insure that fabricated trusses shall be handled, stored, and installed in such a manner that they are not subjected to damage. If it is necessary to store trusses prior to installation, the trusses must be stored in a vertical position with adequate bearing points and bracing to prevent tipping or racking. Proper handling, safety precautions and other procedures consistent with good installation practices must be observed by all sub-contractors and their employees. Installation restraint bracing shall hold trusses straight and plumb and in safe condition until decking and permanent truss restraint/bracing has been fastened forming a structurally sound framing system. All sub-contractors shall employ proper construction procedures to insure adequate distribution of temporary construction loads so that the carrying capacity of any single truss, or group of trusses, is not exceeded. All temporary and permanent restraints/bracing shall be installed and all trusses permanently fastened before application of any loads. Permanent structural restraint shall be installed according to the design of the Architect or Engineer of Record.

Alpine TrusSteel chord and web members SHALL NOT be removed, cut, or altered without the prior approval of the truss design engineer. Damaged chords, webs, or complete trusses shall be repaired or replaced as directed and approved by a registered Professional Engineer. The repair or replacement detail(s) shall be approved by a registered Professional Engineer prior to Installation or application of the repair or replacement.

Alpine TrusSteel CFS trusses shall be installed in a properly designed, ventilated, and enclosed roof or floor cavity capable of maintaining a relative humidity below 95%. Properly installed trusses require no ongoing maintenance.

CODE APPROVAL

National Evaluation Report No. NER-529, ICBO Evaluation Report No. ER-5638.

ASSOCIATION MEMBERSHIPS

Alpine TrusSteel personnel are active members in the Cold-Formed Steel Engineers Institute, American Iron and Steel Institute, American Society for Testing & Materials, American Society of Civil Engineers, National Association of Professional Engineers, Construction Specifications Institute, Steel Truss & Component Association, and other industry groups.

UL LISTINGS

TrusSteel products qualify for hourly ratings as shown below.

Design	Assembly	Hourly Rating	Material Assembly
P525 (Pitched Roof)	Restrained	1, 1-1/2, and 2	Single Layer 5/8" Type C Wallboard
	Unrestrained	1 and 1-1/2	Single Layer 5/8" Type C Wallboard
	Unrestrained	2	Double Layer 5/8" Type C Wallboard
P540 (Pitched Roof)	Restrained	1	Single Layer 5/8" Type FSW-C or FSW-G Wallboard - Insulated Cavity
	Unrestrained	1	Single Layer 5/8" Type FSW-C or FSW-G Wallboard - Insulated Cavity
P526 (Pitched Roof)	Restrained	1	Single Layer 5/8" Type C Wallboard – Insulated Cavity
	Unrestrained	1	Single Layer 5/8" Type C Wallboard – Insulated Cavity
L551 (Flat Truss/Floor)	Unrestrained	1	Single Layer 5/8" Type C Wallboard – Insulated Cavity
L565 (Flat Truss/Floor)	Unrestrained	1	Single Layer 5/8" Type FSW-C or FSW-G Wallboard - Insulated Cavity
	Restrained	1	Single Layer 5/8" Type C Wallboard – Insulated Cavity
G542 (Flat Truss/Floor)	Unrestrained	1	Single Layer 5/8" Type C Wallboard – Insulated Cavity

WARRANTY

Alpine TrusSteel warrants that, after reasonable notice in writing delivered to the Division Engineer, Alpine TrusSteel, 2400 Lake Orange Dr., Ste. 150 Orlando, FL 32837, and after reasonable opportunity to inspect, it will repair or replace without charge, any product manufactured by Alpine TrusSteel which, upon inspection, is found by Alpine TrusSteel to have been defective at the time of delivery by Alpine TrusSteel. This warranty does not apply in the event the products have been altered, damaged, fabricated improperly, installed improperly, or misused in any manner after delivery by Alpine TrusSteel. This remedy shall constitute Alpine TrusSteel's sole obligation and purchaser's sole remedy under this warranty. In no event will Alpine TrusSteel be responsible for incidental, consequential, or special loss or damage regardless of cause. Products sold, but not manufactured by Alpine TrusSteel shall be subject to the warranties of the respective manufacturers. The warranty described in this paragraph shall be in lieu of any other warranty, express or implied, included but not limited to, any implied warranty of merchantability or fitness for a particular purpose, all such other warranties being hereby expressly excluded.