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POSI-STRUT® METAL WEB TRUSSES

CSI Section:
06 17 36 Metal-Web Wood Joists

1.0 RECOGNITION

The Posi-Strut® metal web trusses recognized in this report have been evaluated for fire-protection of floors. In accordance with Exception 4 to Section R302.13 of the 2024, 2021, 2018, and 2015 International Residential Code (Section R501.3 of the 2012 IRC), the trusses were evaluated for equivalent fire performance to 2-inch-by-10-inch nominal dimension lumber. The metal web trusses meet the intent of the provisions of the following code editions:

- 2024, 2021, 2018, 2015, and 2012 International Residential Code® (IRC)

2.0 LIMITATIONS

Use of the Posi-Strut® metal web trusses recognized in this report is subject to the following limitations:

2.1 The Posi-Strut® metal web trusses have only been evaluated for the fire-protection requirements noted in Section 1.0. The truss assemblies shall be limited to 82% of the Allowable Stress Design (ASD) design capacity for fire-protection equivalency. All other code requirements shall be evaluated by an approved evaluation service and subject to approval of the building official.

2.2. Selection of the floor trusses for structural loading and its supporting structure shall be by an approved structural design professional. The registered design professional shall prepare calculations and truss design drawings when required by the statutes of the jurisdiction in which the project is to be constructed.

2.3 The top chord of the trusses shall be continuously braced in accordance with the installation instructions and IRC Sections R802.10 or 2024 IRC Section R502.12 (2021, 2018, 2015, and 2012 IRC Section R502.11).

2.4 Posi-Strut® metal web truss design drawings shall comply with IRC Section R802.10 or 2024 IRC Section R502.12 (2021, 2018, 2015, and 2012 IRC Section R502.11) and be submitted to the building official and approved prior to installation.

3.0 PRODUCT USE

3.1 Design: Posi-Strut® metal web trusses shall be designed in accordance with manufacturer's design information, ANSI/AWC National Specification for Wood Construction (NDS), IRC Section R802.10 or 2024 IRC Section R502.12 (2021, 2018, 2015, and 2012 IRC Section R502.11), and as applicable, evaluation reports by an approved and accredited certification agency.

3.1.1 Fire Protection of Floors: The minimum 9¹/₄-inch (235 mm) deep trusses at a maximum spacing of 24 inches (610 mm) offer equivalent fire performance to 2-inch by 10-inch nominal dimension solid sawn lumber and are recognized for installation without the prescribed gypsum wallboard or wood structural panel membrane as permitted in Exception 4 to the 2024, 2021, 2018, and 2015 IRC Section R302.13 (Section R501.3 of the 2012 IRC), when installed as described in this report.

3.2 Installation: Installation of the Posi-Strut® metal web trusses shall be in accordance with manufacturer's installation guide, this evaluation report, and the applicable provisions of the IRC. Where there is a conflict between these documents, the most restrictive provisions shall govern. The manufacturer's installation instructions and this report shall be available at the job site during construction for use by installers and for quality assurance.

4.0 PRODUCT DESCRIPTION

4.1 General: Posi-Strut® metal web trusses are prefabricated open web floor joists constructed of solid-sawn wood chords and proprietary metal web members. Web members are connected to chords by pressing Posi-Strut® metal webs into the sides of the wood members so that the teeth of the Posi-Strut® metal webs are fully embedded in the wood members.

4.1.1 Chords: The top and bottom chords shall be constructed of nominal 2-inch by 4-inch No. 2 solid-sawn lumber or higher quality grade that complies with 2024, 2021, 2018, and 2015 IRC Section R502.1.1 (2012 IRC Section R502.1).

4.1.2 Web Members: The Posi-Strut® proprietary V-shaped metal web members are constructed of nominal 20 gage (0.9 mm) ASTM A653, SS, Grade 40 steel with minimum G60 galvanization coating. Table 1 of this report has further information on the Posi-Strut® metal web members. Evidence of compliance with IRC Section R502 or R802 shall be submitted to the building official for approval. The evidence may be in the form of evaluation reports issued by approved sources.

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with Section 104.2.3 of the 2024 IBC and Section 104.11 of previous editions. This document shall only be reproduced in its entirety.

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5.0 IDENTIFICATION

The Posi-Strut® metal web members and packaging are marked in accordance with ANSI/TPI 1 National Design Standard for Metal Plate Connected Wood Truss Construction. The truss placement diagram shall indicate individually designated trusses referenced in the truss design drawing.

6.0 SUBSTANTIATING DATA

6.1 Report of Fire-resistance testing in accordance with ASTM D8391-22e1.

6.2 Data in accordance with Section 6.2.3 (Fire Resistance) of EC017-2014, Evaluation Criteria for Field-Applied Fire Protective Coatings, Editorially Revised April 2025.

6.3 Technical Assessment of Fire Performance.

6.4 Manufacturer's quality documentation, descriptive literature, and installation instructions.

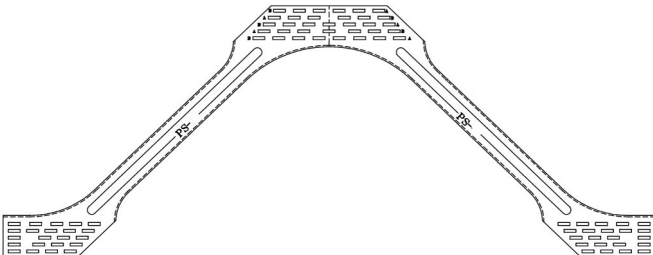
6.5 Test reports are from laboratories in compliance with ISO/IEC 17025.

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Posi-Strut® metal web trusses to assess their conformance to the codes shown in Section 1.0 of this report.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org

TABLE 1 – MITEK POSI-STRUT METAL WEB

Web Type	Clearance Between Chords	Truss Depth	Typical Posi-Strut V-shaped Metal Web
PS10	6 ¹ / ₄ "	9 ¹ / ₄ "	
PS12	8 ¹ / ₄ "	11 ¹ / ₄ "	
PS12i	8 ⁷ / ₈ "	11 ⁷ / ₈ "	
PS14	11"	14"	
PS16	13"	16"	