



# Product Evaluation Report

**PER-07020**

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Goshen, Indiana 46528

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Listed Product

**Smart Strut System**

Listed For

**Convia Inc.**

**a Herman Miller Company**

1370 Abbott Court  
Buffalo Grove, IL 60089

*Progressive Engineering Inc.* is an accredited Testing Laboratory and Third Party Quality Control Agency. This **Product Evaluation Report** represents a product that Pei has a follow-up service agreement with. This **Product Evaluation Report** in no way implies warranty for this product or relieves **Convia, A Herman Miller Company** of their liabilities for this product. Pei is accredited to ISO Standard 17020 and 17025. This **PER** is an official document if it is within one year of the initial or renewal date.

Approved Manufacturer's

**Shape Corporation**

1900 Hayes  
Grand Haven, MI 49417

**Dewys Manufacturing**

1530 8th Avenue  
Marne, MI 49435

Product Descriptions

The **Smart Strut System** is the structural element of an open ceiling grid product that supports a plug and play power distribution system designed to accommodate unlimited electrical reconfigurations. This product is in no way meant as support or structure to the existing building that it is installed in. The Smart Strut system consists of a suspended grid system supported at 5 ft. intervals. Unistrut is attached to this grid at 8ft., 10ft. and 12ft. spans.

The Smart Strut Systems is constructed of 12 & 14 gage SAE 1006, 1008, 1009 Galvanized Sheet Steel G60/G90 with a measured minimum thickness of .050" thick.

The Smart Strut System is suspended from the existing building structure by 3/8"-16 threaded rod. The maximum load to be applied to each threaded rod is 960 pounds. The ability of the existing building structure is outside of the scope of this PER.

General Product Use

The **Smart Strut System** provides for control of lighting and other building systems at multiple spacing intervals. This system allows for easily reconfiguration and optimization of wiring, power lines, lighting fixtures, controls and other appliances by enabling physical and logical flexibility.

Smart Strut Grid System Load Capacities

**14 Gage Smart Strut Supported 5ft. O.C.**

Maximum Vertical Downward Uniform Load = **203** PLF.

**14 Gage Smart Strut Supported 10ft. O.C.**

Maximum Vertical Point Load = **502** lbs.

**New Universal Support Bracket & Suspension Plate**

Maximum Vertical Downward Load = **960** lbs.

**Unistrut**

13 Gage supported 8ft. O.C.

Maximum Point Load = **210** lbs.

14 Gage supported 10ft. O.C.

Maximum Point Load = **110** lbs.

12 Gage supported 10ft. O.C.

Maximum Point Load = **135** lbs.

13 Gage supported 12ft. O.C.

Maximum Point Load = **92** lbs.

**Aluminum Cross Rail (Supported 10ft. O.C.)**

Maximum Point Load = **112** lbs.

**Aluminum Cross Rail (Supported 12ft. O.C.)**

Maximum Point Load = **74** lbs.

**1/2" Light Bracket**

Maximum Horizontal Fixture Weight = **228** lbs.

Maximum Vertical Fixture Weight = **280** lbs.

**3/4" Light Bracket**

Maximum Horizontal Fixture Weight = **100** lbs.

Maximum Vertical Fixture Weight = **814** lbs.

**Code Compliance****2003 International Residential Code**  
Section R407.2 and R407.3**2003 International Building Code**  
Section 104.11.1 and 104.11.2**2006 International Residential Code**  
Section R407.2 and R407.3**2006 International Building Code**  
Section 104.11.1 and 104.11.2**Product Documentation**

A **Pei** test report No. 2005-970(A) - Smart Strut Uniform Load Tests Using 5ft. Supports - Dated 7/25/2005 - stamped by a Professional Engineer.

A **Pei** test report No. 2005-970(B) Unistrut Point Load Tests on 8ft., 10ft., & 12ft., Spans- Dated 8/1/2005 - stamped by a Professional Engineer.

A **Pei** test report No. 2005-970 (C) - Universal Support Bracket & Suspension Plate Ultimate Load Test - Dated 7/26/2005 - stamped by a Professional Engineer.

A **Pei** test report No. 2005-970 (D) - Light Bracket Vertical & Lateral Load Tests - Dated 10/28/2005 - stamped by a Professional Engineer.

A **Pei** test report No. 2005-970 (E) - Cross Rail Point Load Test on 10ft. & 12ft. Spans - Dated 9/12/2005 - stamped by a Professional Engineer.

A **Pei** test report No. 2006-1762 - Universal Support Bracket & Suspension Plate Ultimate Load Re-Test - Dated 11/18/2006.

A QA Manual for Shape Corporation dated August 2007.

A QA Manual for DeWys Manufacturing dated August 2007.

**Product Labeling**

All columns manufactured by Convia, A Herman Miller Company, Inc. that are covered by this PER must have a label attached with at least the following information:

1. Date of manufacture
2. Load Capacity
3. Manufacturer's name
4. This PER number & Pei's logo

