Product Evaluation Report

PER-12060

This Document Published By: *Progressive Engineering Inc.*

Initial Listing	Re-Approved		
January, 2013		58640 State Road 15 Goshen, Indiana 46528	574-533-0337 www.p-e-i.com

Listed Product

DH4 4-Way Seismic Separation Joint Clip

Listed For

USG Interiors, LLC

550 West Adams Street
Chicago, Illinois 60661
USG Support: 800.USG4YOU (usg4you@usg.com)

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 **USG Interiors, LLC** 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 Manufacturing Locations

USG Interiors, LLC - Plant # 601
1000 Crocker Rd.
Westlake, OH 44145-1089

Listing Details

DH4 4-Way Seismic Separation Joint Clip is manufactured by **USG Interiors, LLC**. The plant location listed above has an approved Q.C. Manual to manufacture the product and a Follow-up Service Agreement with ***Progressive Engineering Inc*** . The plant location listed above will be audited Quarterly by ***Pei*** .

Product Description

The **DH4 4-Way Seismic Separation Joint Clip** is a one piece hot-dipped galvanized steel structure. The joint clip is 5.2" in length x 1.3" in height, which will allow for a full size acoustical panel at the separation joint and maintains square and strength of the suspension system. Concealing tee-face sleeves are 3" long and offer use with DX/DXL 15/16" systems, Centricitee™ DXT 9/16" systems, Fineline® DXF systems with 1/4" Reveal, Fineline® DXFF systems with 1/8" Reveal and DXI Identitee™ systems.

The **DH4 4-Way Seismic Separation Joint Clip** is non-directional and can be used on either main tees or cross tees. Fastener holes and expansion slots enable fail-safe installation, furthermore no extra hangers or special fasteners are required. Clip placement is over the bulb of the tee and does not interfere with light fixtures, allowing a clean uninterrupted look.

Applications include all interior general use areas and works with Donn® Suspension Systems, DX®/DXL™, Fineline® (DXF), Fineline® 1/8" (DXFF), Centricitee™ (DXT), DXLA™, DXI Identitee™ and ZXLA™ (Environmental).

The joint clip meets or exceeds all national code requirements and fulfills requirements for IBC Seismic Design Categories D, E and F.

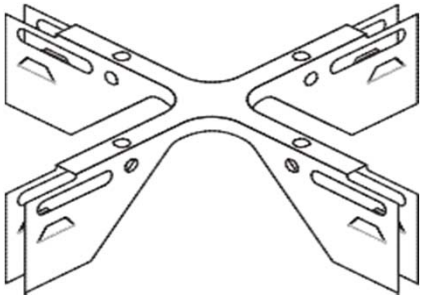
General Product Use

1. The **DH4 4-Way Seismic Separation Joint Clip** shall be installed in accordance with the installation guide provided for and are subject to the conditions of this **PER**. A copy of the installation guide shall be made easily available to the installer.
2. Seismic separation joints can be installed in any combination of main tees or cross tees and may be constructed at a main tee or cross tee intersection to conceal the separation joint from below.
3. Suspension system tees may be broken to construct a seismic separation joint provided a device is used to secure the tees together that allows movement or supplementary hanger wires should be installed.
4. The seismic separation joints are meant for the suspension system alone and ceiling panels should not be installed differently. Installed in compliance with ASTM C 636 and ASTM C 635.
5. A braced partition or kicker may be constructed to minimize or eliminate seismic separation joints.
6. Seismic separation joints shall be capable of allowing [+or-] 3/4"(18mm) axial movement.
7. Lateral force bracing should not be attached directly to seismic separation joints.

General Product Use Continued

8. A structural engineer should be consulted for very large suspended ceilings where multiple separation joints are necessary to break the ceiling into areas less than 2,500sq.ft. (232m^2).

9. Seismic separation joints should be installed in accordance if that an area less than 2,500sq.ft. (232m^2) has a ratio of the long to short dimension less than or equal to four (4).



Code Compliance

2012 International Building Code
Section 2506.2.1, Section 808.1 and 808.1.1 Section 1613 - In Compliance with Requirements

Note: Installed to the requirements based on Sections 808.1.1.1 and 803.11.2.1

ACM7 Seismic Clip Performance		
Test	**Failure Criteria**	**Results**
Tension Test	Tee fallout / displacement	Less than 300 lbs. Load Test stopped to protect equipment Failure load will exceed this level
Compression Test	Tee fallout / displacement	Less than 400 lbs. Load Test stopped to protect equipment Failure load will exceed this level

Note: ASTM Class - Heavy Duty use

Load Rating Classifications		
Light Duty	**Intermediate Duty**	**Heavy Duty**
5 lbs./LF	12 lbs./LF	16 lbs./LF

Seismic Design Classifications		
Seismic Design Category A, B	**Seismic Design Category C**	**Seismic Design Category D, E, F**
No requirement	Intermediate Duty	Heavy Duty

Note: DH4 Seismic Expansion Joint Clip - Seismic Category: D, E, F

Compliance with the following Standard

ASCE 7 - Minimum Design Loads for Buildings and Structures

ASTM C 636 - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels

ASTM C 635 - Standard Specifications for the Manufacture, Performance and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings

ASTM E 580 - Standard Practice for Application of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Requiring Moderate Seismic Restraint

Product Documentation

USG Interiors, LLC *Quality Control Manual for Donn® Brand Suspension Systems and* ***USG*** *Drywall Suspension Systems -- Dated: May 28, 2013*

ICC-ES Evaluation Report ESR-1222 -- Dated: December 1, 2011

USG Interiors, LLC *Donn® Suspension Systems - 4-Way Seismic Separation Joint Clip - Submittal Sheet -- Dated: February, 2012*

USG Interiors, LCC *Seismc Technical Guide - Seismic Separation Joints - Technical Document -- Dated: February, 2012*

Product Documentation Continued

Seismic Evaluation of Suspended Ceiling Systems: Phase 1 and 2 of 2011 Test Program. *Report No. PEER-STI/2011-12 Pacific Earthquake Engineering Research Center, University of California, Berkeley, Dated: July, 2011.*

Test No. Listed Below

Test No. 172 - DH4 Seismic Expansion Joint Clip *, Dated: February 15, 2011.*

Product Labeling

Each **DH4 4-Way Seismic Separation Joint Clip** assembly shipment, that is covered by this **Product Evaluation Report**, must have a label attached with at least the following information:

1. **USG Interior, LLC**'s name and address
2. Product name
3. Plant identifier & date code
4. The **PER** number and ***Pei*** 's name or logo
5. ICC-ES ESR Report Number